



FY 1999 Technology Deployment in Environmental Management

Engineering Tomorrow's Solutions Today

**Site Technology Coordination Group / Technology Deployment Center
U.S. Department of Energy, Idaho Operations Office**



Heated Vacuum Drying System

Problem: A unique system was needed to dry fuel debris from the Three Mile Island Unit 2 (TMI-2) accident.

Baseline Technology: Components of the HVDS technology have existed, however, a system needed to be tailored for TMI-2 fuel. TMI-2 core debris is canisterized whereas commercial fuel is clad.

Innovative Technology: The Heated Vacuum Drying System (HVDS) provides the means to dry the TMI-2 canisters to a given acceptance criteria which will reduce the moisture content of the canisters to preclude criticality concerns during transportation and storage of the canisters.

Comparison: TMI-2 material would continue to be stored underwater in a fuel storage basin at INEEL's Test Area North Hot Shop. Since the Hot Shop is scheduled for decommissioning as part of the overall INEEL plan, dry storage has been selected as the interim storage approach.

Benefits: The HVDS enables TMI-2 debris to be placed in dry storage and will be dedicated to the TMI-2 process exclusively until all of the TMI-2 fuel is stored in Dry Shielded Canisters, the deadline for which is June 1, 2001.

Non-OST

Heated Vacuum Drying System



Idaho National Engineering and Environmental Laboratory